

# Digital 10A Micro-Ohmmeters

Models 6240 & 6250

**Measure low  
resistance with  
high accuracy**

- ▶ Selectable test current and resistance ranges
- ▶ 0.1 $\mu\Omega$  resolution
- ▶ Simple one button “press-to-start” operation
- ▶ Software temperature correction for accurate measurements
- ▶ Automatically takes multiple measurements by simply moving the test probes from point to point
- ▶ Stores test results internally
- ▶ Large easy-to-read backlit electroluminescent display
- ▶ Data storage, analysis and report generation through DataView® software included

*Our products are backed by over 100 years of experience in test and measurement equipment, and encompass the latest international standards for quality and safety.*

 **Technical Hotline: (800) 343-1391**  
 **www.aemc.com**

 **AEMC®**  
INSTRUMENTS  
CHAUVIN ARNOUX GROUP



The 10A Micro-Ohmmeter Model 6250 is a rugged, low resistance tester designed for plant maintenance, quality control in manufacturing and field use. Utilizing a four-lead Kelvin method of testing, the Model 6250 is one of the more accurate Micro-Ohmmeters available, with results up to 0.05% high accuracy.

Resistance measurements are automatically calculated and displayed, taking into account the measurement value, ambient temperature, reference temperature and metal temperature coefficient. Sample temperature can be manually entered by the operator or directly measured by the Model 6250 with an external RTD temperature probe.

The Model 6250 is uniquely designed to conduct tests on both resistive and inductive material, with operator selection directly from the front panel. Three test modes are available and automatically employed based on this selection:

**Resistive** materials (i.e. ground bonding, coatings, contact resistances) are tested with an instantaneous test. Simply press the test button – the reading is taken and the test is concluded.

**Inductive** materials (i.e. coils, transformers, motor windings) are tested with a continuous test. The test is started and stopped by the operator at the push of a button.

**Auto** test mode is designed for multiple test points on resistive and/or low inductance material. The test is started at the press of a button. As the operator moves the probe from one point to another, the test is stopped, the results are displayed and a new test is started when the test probes again make contact – no need to press the test button! Residual voltage is measured between tests to ensure proper results. This test mode continues until the operator presses the button to conclude the testing.

The large, easy-to-read display shows the resistance measurement, ambient and reference temperatures, metal type and test method, as well as alarm conditions and memory utilization, all in real time. Previously stored test results can easily be called up for review on the display or sent directly to a printer or remote terminal.

Two programmable alarm set points are available. Each can be either active high or low and will sound an alarm when tripped, further adding to the ease of use by permitting quick Pass/Fail measurements. External trigger operation is available through the communication port allowing the test to be conducted from a remote location.

The list of features and functions goes on and on. The Model 6250 will be a valuable asset for your bond testing, coil and contact testing as well as coatings and connector or any other low resistance testing application.

## ▶ FEATURES

- ▶ Measure from 0.0001mΩ (0.1μΩ resolution) to 2500.0Ω
- ▶ Test current selection of 1mA, 10mA, 100mA, 1A and 10A
- ▶ RTD temperature probe to check tested sample (optional)
- ▶ Selectable metal types
- ▶ Automatic and manual temperature correction
- ▶ EMF levels measured and eliminated in measurement
- ▶ Two programmable alarm set points
- ▶ Stores up to 1500 test results
- ▶ Selectable Inductive or Resistive test modes
- ▶ Automatic multiple test mode (multiple tests without pressing the test button)
- ▶ Large multi-line electroluminescent display
- ▶ Local or remote test setup and control
- ▶ Direct printout
- ▶ Internal rechargeable batteries – conduct up to 5000 10A tests
- ▶ Rugged, double insulated waterproof case

## ▶ APPLICATIONS

- ▶ Aerospace metallic coating resistance measurement
- ▶ Winding resistance measurement of motors and transformers
- ▶ Bonding verification on earth/ground systems
- ▶ Weld joint integrity verification
- ▶ Contact resistance measurement of breakers and switchgear
- ▶ Aircraft and rail bonding checks
- ▶ Wire to terminal connections and resistance checks
- ▶ Battery strap resistance checks
- ▶ Cable joint and bus bar connection checks
- ▶ Mechanical bond tests



Model 6240



Model 6250



# Model 6240



The 10A Micro-Ohmmeter Model 6240 is a rugged, low resistance tester designed for both plant and field use. It is a cost effective, feature rich instrument designed for measuring contact resistance, bond resistance and other low resistance connections. The Micro-Ohmmeter Model 6240 accurately measures very low resistance with 0.25% accuracy utilizing a four-lead Kelvin method of testing.

An internal NiMH battery pack is rechargeable from 110/230V, 50/60Hz. A fully charged battery can perform up to 850, 10A tests.

Resistance measurements are automatically calculated from  $1\mu\Omega$  to  $400\Omega$  with resolutions down to  $1\mu\Omega$ .

The Model 6240 has selectable test currents of 10A, 1A, 100mA and 10mA and includes a polarity reversal function. The Model 6240 is designed to conduct tests on both resistive and inductive material. Polarity reversal is easily accomplished with a push of a button. The resistance measurements of both positive and negative test results, as well as the average, are displayed.

A large easy-to-read multi-line backlit display indicates all test result information including the resistance measurement, test current and test voltage.

An automatic test mode feature provides for repetitive tests by simply moving the test probes from point to point, displaying the test results and automatically storing the reading in the instrument's internal memory for later recall and report generation.

Up to 99 measurements can be stored and printed directly to a printer or downloaded to a PC for analysis and report generation.

An optically isolated USB port provides quick and easy downloads while protecting the PC from any electrical interference.

The DataView® software included allows you to: download data, temperature compensate the test results, store data and print reports using predefined templates or custom templates you create.

## ▶ FEATURES

- ▶ Reliable low resistance measurements
- ▶ Four-terminal Kelvin resistance measurement eliminates test lead resistance
- ▶ 10A test current at up to  $4000\mu\Omega$
- ▶ 0.25% basic accuracy
- ▶  $1\mu\Omega$  resolution
- ▶ Direct reading, easy to operate
- ▶ Six selectable resistance ranges
- ▶ Polarity reversal button
- ▶ Overload and input fuse protection
- ▶ Manufactured to international safety and environmental standards
- ▶ Automatic scaling and zeroing
- ▶ Large terminals accept banana plugs and spade lugs
- ▶ Rechargeable NiMH battery with internal charger (110/230V)
- ▶ Rugged, double insulated waterproof case
- ▶ Includes DataView® software for instrument configuration, data storage, analysis and report generation

## ▶ APPLICATIONS

- ▶ Aerospace metallic coating resistance measurement
- ▶ Bonding verification on earth/ground systems
- ▶ Weld joint integrity verification
- ▶ Contact resistance measurement of breakers and switchgear
- ▶ Aircraft and rail bonding checks
- ▶ Wire to terminal connections and resistance checks
- ▶ Battery strap resistance checks
- ▶ Cable joint and bus bar connection checks
- ▶ Mechanical bond tests



Model 6240



Model 6250



# SPECIFICATIONS

MODELS	6240						6250						
<b>ELECTRICAL</b>													
Range	4000 $\mu\Omega$	40m $\Omega$	400m $\Omega$	4000m $\Omega$	40 $\Omega$	400 $\Omega$	5.000m $\Omega$	25.000m $\Omega$	250.00m $\Omega$	2500.0m $\Omega$	25.000 $\Omega$	250.00 $\Omega$	2500.0 $\Omega$
Accuracy	0.25% of Reading $\pm$ 2cts	0.25% of Reading $\pm$ 2cts	0.25% of Reading $\pm$ 2cts	0.25% of Reading $\pm$ 2cts	0.25% of Reading $\pm$ 2cts	0.25% of Reading $\pm$ 2cts	0.15% of Reading + 1 $\mu\Omega$	0.05% of Reading + 3 $\mu\Omega$	0.05% of Reading + 30 $\mu\Omega$	0.05% of Reading + 0.3m $\Omega$	0.05% of Reading + 3m $\Omega$	0.05% of Reading + 30m $\Omega$	0.05% of Reading + 300m $\Omega$
Resolution	1 $\mu\Omega$	10 $\mu\Omega$	0.1m $\Omega$	1m $\Omega$	10m $\Omega$	100m $\Omega$	0.1 $\mu\Omega$	1 $\mu\Omega$	10 $\mu\Omega$	0.1m $\Omega$	1m $\Omega$	10m $\Omega$	100m $\Omega$
Test Current	10A	1A	1A	100mA	10mA	10mA	10A	10A	10A	1A	100mA	10mA	1mA
Measurement Mode	Single test start/stop or auto test and store of multiple measurements						Selectable: Inductive (continuous test), Resistive (instantaneous test) or Auto (multiple tests)						
Power Source	Rechargeable 6V, 8.5Ah NiMH batteries												
Battery Life	Up to 850, 10A tests						Approximately 5000, 10A tests						
Battery Charging	Internal 110/230Vac, 50/60Hz charger						Internal 120/240Vac, 45/400Hz line voltage						
Power Management	User selectable power save mode						Display powers down after 1, 5 or 10 minutes of inactivity (operator selectable)						
Low Battery Indication	<input type="checkbox"/> blinks when battery needs changing						<input type="checkbox"/> displays when battery needs changing						
Memory	Stores up to 99 test results Data in memory can be reviewed on the instrument display, on a PC or via direct printout						Stores up to 1500 test results Data in memory can be reviewed on the instrument display, on a PC or via direct printout						
<b>MECHANICAL</b>													
Dimensions	10.70 x 9.76 x 7.17" (270 x 250 x 180mm)						10.63 x 9.84 x 7.09" (270 x 250 x 180mm)						
Weight	10 lbs. (4.5kg)						8.1 lbs (3.69kg)						
Index of Protection	IP53 (case open); IP54 (case closed)						IP53 (case open); IP64 (case closed)						
<b>DISPLAY</b>													
Display Type	4000-count LCD						Large 50,000-count digital						
Size	4 x 2.25" (102 x 57mm)												
Backlight	Blue electroluminescent												
Color	Safety yellow case; gray faceplate UL94 V-0												
<b>COMMUNICATION</b>													
Interface Port	Optically isolated USB						a-pin, RS-232						
<b>ENVIRONMENTAL</b>													
Operating Temperature	14° to 132°F (-10° to 55°C); 10 to 85% RH						14° to 132°F (-10° to 55°C); 10 to 80% RH (non-condensing)						
Storage Temperature	-40° to +158°F (-40° to +70°C); 10 to 90% RH						-40° to 140°F (-40° to 60°C)						
<b>SAFETY</b>													
Safety Rating	EN61010-1 300V CAT II						EN 61010-1, 50V CAT III						
Double Insulation <input type="checkbox"/>	Yes						Yes						
CE Mark	Yes						Yes						
Catalog No.	2129.80						2129.81						

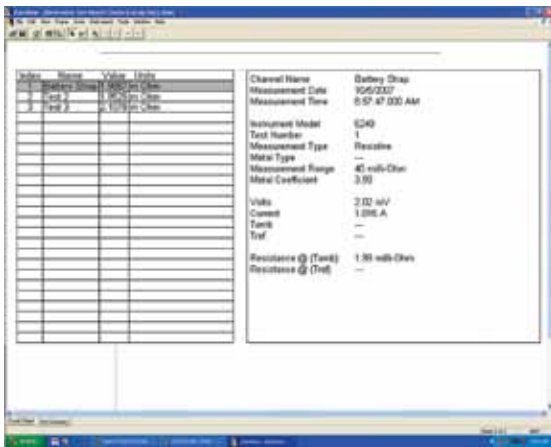
# DataView®

## Data Analysis and Reporting Software



### Features

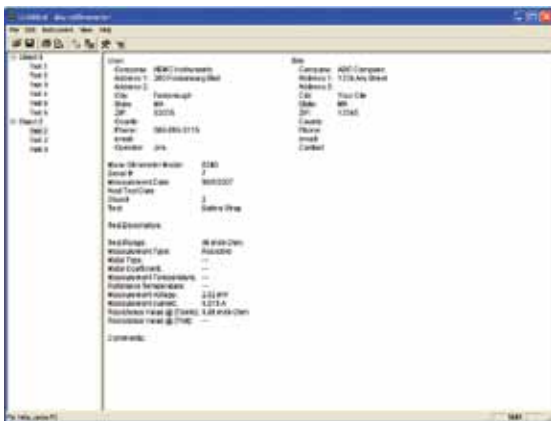
- ▶ Configure from your PC
- ▶ Customize views, templates and reports to your exact needs
- ▶ Create and store a library of configurations that can be used with the Models 6240 & 6250 as needed
- ▶ Display test results
- ▶ Print reports using standard included templates or custom templates you design



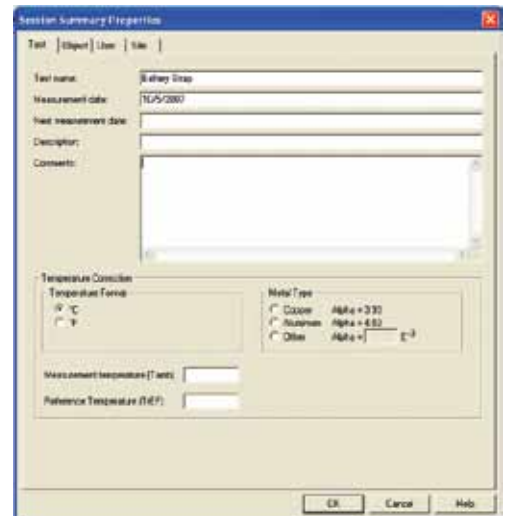
Statistical presentation of measurements.



All set up functioning available from one screen.



Clean, easy-to-read report of test results.



Easily documents statistics about user and test site to be stored with the data.

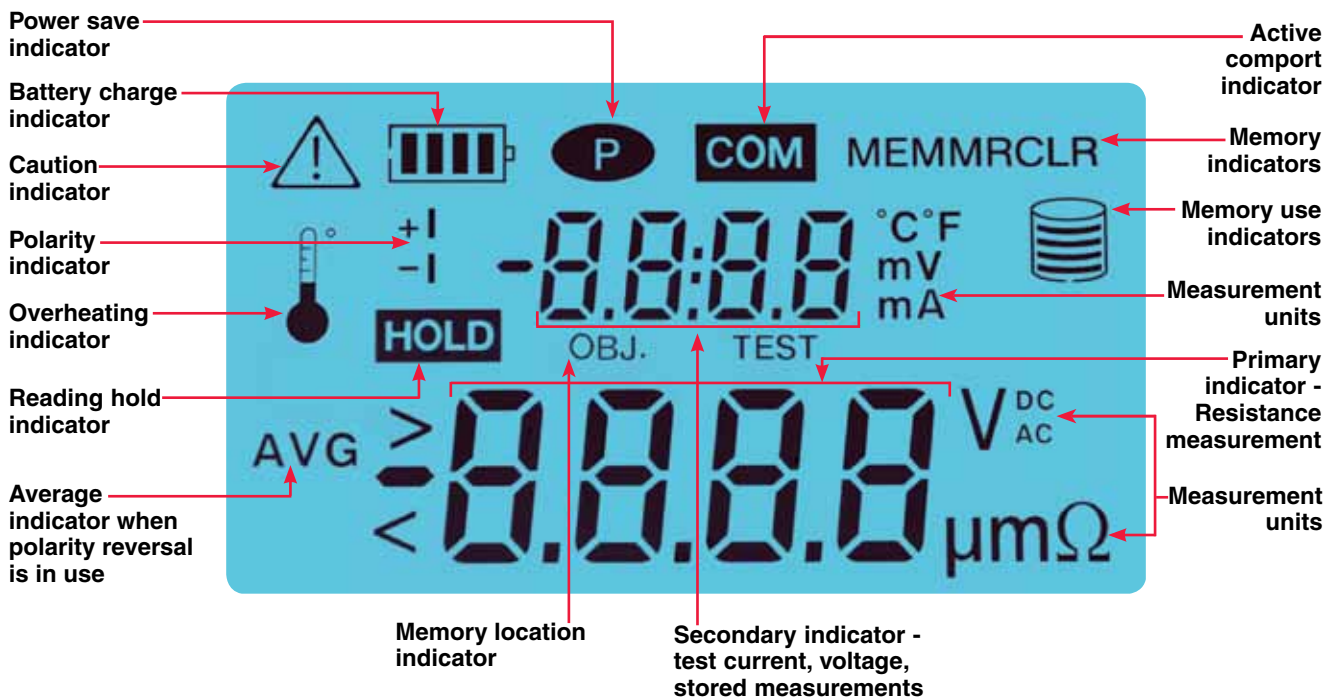
# CONSTRUCTION

## Model 6240



\* Function buttons allow direct access to data storage and retrieval, polarity reversal, auto/manual measurement and displayed values.

# FUNCTIONAL DISPLAY

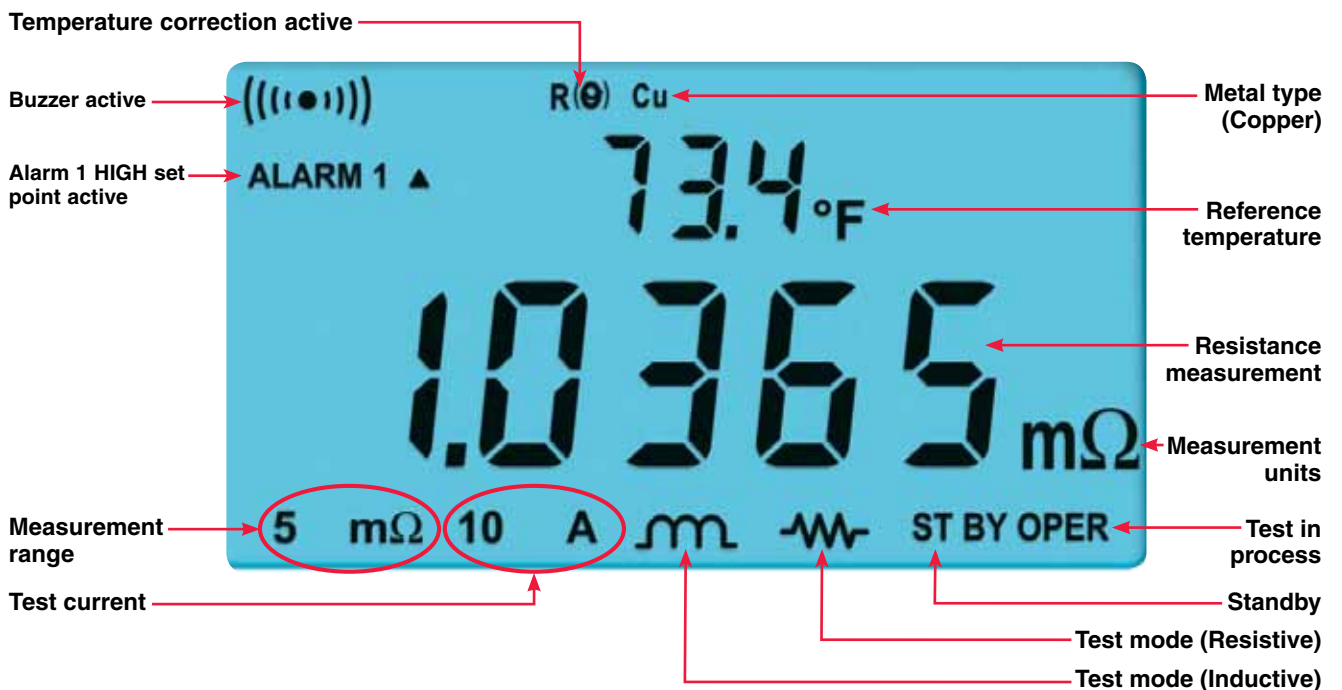


# CONSTRUCTION

**Model 6250**



# FUNCTIONAL DISPLAY



# ACCESSORIES



Kelvin clips, set of two, (1-10A) 10 ft  
Catalog #2118.79  
Kelvin clips, set of two, (1-10A) 20 ft  
Catalog #2118.80



Kelvin probes,  
set of two, spring loaded  
(1A) 10 ft Catalog #2118.73  
(1A) 20 ft Catalog #2118.74



Kelvin clips, set of two,  
(10A – Hippo) 10 ft are included with Model 6250  
Catalog #1017.84



RTD Temperature Probe with  
7 ft extension cable  
Catalog #2129.96  
(model 6250 only)

## ORDERING INFORMATION

**10A Micro-Ohmmeter Model 6240** ..... **Cat. #2129.80**

Includes set of two 10 ft Kelvin clips (10A - Hippo), NiMH rechargeable battery pack, optical USB cable, US 115V power cord, one pad of measurement results forms, DataView® software, extra large tool bag, two spare fuses (12.5A), product warranty and registration card and a user manual.

**10A Micro-Ohmmeter Model 6250** ..... **Cat. #2129.81**

Includes set of two 10 ft Kelvin clips (10A - Hippo), NiMH rechargeable 6V battery pack, one RS-232 DB9 F/F 6 ft null modem cable, US 115V power cord, extra large tool bag, quick reference guide, one pad of measurement result forms, DataView® software CD, product warranty registration card and user manual.

### Accessories (Optional)

Kelvin Clips (10A – Hippo), set of two, 10 ft .....	1017.84
RTD Temperature Probe (plug into faceplate for ambient temperature) <b>for Model 6250</b> .....	2129.95
RTD Temperature Probe with 7 ft extension cable <b>for Model 6250</b> .....	2129.96
Kelvin Clips (10A – Hippo), set of two, 20 ft .....	2118.70
Kelvin Probes (1A – spring loaded), set of two, 10 ft .....	2118.73
Kelvin Probes (1A – spring loaded), set of two, 20 ft .....	2118.74
Kelvin Clips (1-10A), set of two, 10 ft .....	2118.79
Kelvin Clips (1-10A), set of two, 20 ft .....	2118.80



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